

OPERATING EXPERIENCE WITH THE METHANATION UNITS IN THE HYGAS  
PILOT PLANT, W. G. Bair, Institute of Gas Technology, 4201 West 36th Street,  
Chicago, Illinois 60632

The HYGAS process includes a methanation section utilizing a fixed bed catalyst, multiple reactor stages and cold, product gas recycle for temperature control. To date about 550 hours of operation have been obtained on this unit with a wide range of  $H_2/CO$  ratio feed gases. Complete conversion (less than 10 ppm in the product gas) of CO has been obtained in all operation to date.

This paper describes the equipment, process controls, catalyst, and instrumentation of the system and gives operating conditions and results.